

***RECORD OF DECISION  
OPERABLE UNITS 1, 2 & 3***

***ATLANTIC WOOD INDUSTRIES, INC. SUPERFUND SITE  
PORTSMOUTH, VIRGINIA***

***U.S. Environmental Protection Agency  
Region 3  
Philadelphia, Pennsylvania  
December 2007***

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## TABLE OF CONTENTS

<b>LIST OF ACRONYMS</b>	<u>7</u>
<b>I. DECLARATION</b>	<u>9</u>
1. SITE NAME AND LOCATION	<u>11</u>
2. STATEMENT OF BASIS AND PURPOSE	<u>11</u>
3. ASSESSMENT OF THE SITE	<u>11</u>
4. DESCRIPTION OF THE REMEDY	<u>11</u>
5. ROD DATA CERTIFICATION CHECKLIST	<u>12</u>
6. STATUTORY DETERMINATIONS	<u>13</u>
7. AUTHORIZING SIGNATURE	<u>14</u>
<b>II. DECISION SUMMARY</b>	<u>15</u>
1. SITE NAME, LOCATION AND DESCRIPTION	<u>17</u>
2. SITE HISTORY AND ENFORCEMENT ACTIVITIES	<u>17</u>
3. COMMUNITY PARTICIPATION	<u>19</u>
4. SCOPE AND ROLE OF THIS RESPONSE ACTION	<u>20</u>
5. SITE CHARACTERISTICS	<u>21</u>
5.1 Site Setting	<u>21</u>
5.2 Adjacent Properties	<u>22</u>
5.3 Site Description	<u>23</u>
5.4 Surface Features, Surface Water, Geology and Hydrogeology, and Ecological Setting	<u>24</u>
5.4.1 Topography and Drainage	<u>24</u>
5.4.2 Surface Water	<u>25</u>
5.4.3 Geology and Hydrogeology	<u>25</u>
5.4.3.1 Geology	<u>26</u>
5.4.3.2 Hydrogeology	<u>26</u>
5.4.4 Ecological Setting	<u>27</u>
5.4.4.1 Upland Habitat	<u>27</u>
5.4.4.2 Wetland Habitat	<u>27</u>
5.4.4.3 River Habitat	<u>28</u>
5.5 Nature and Extent of Contamination	<u>28</u>
5.5.1 Soil	<u>28</u>
5.5.2 Dense Non-aqueous Phase Liquid (DNAPL)	<u>29</u>
5.5.3 Ground Water	<u>29</u>
5.5.3.1 Upper Columbia Aquifer	<u>29</u>
5.5.3.2 Lower Columbia Aquifer	<u>31</u>
5.5.3.3 Yorktown Aquifer	<u>32</u>
5.5.3.4 Evidence of Natural Attenuation	<u>32</u>
5.5.4 River Sediment	<u>33</u>
5.6 Conceptual Site Model	<u>34</u>
6. CURRENT AND POTENTIAL FUTURE SITE USES	<u>35</u>

7.	SUMMARY OF SITE RISKS .....	36
7.1	Human Health Risk Assessment .....	36
7.1.1	Contaminants of Potential Concern .....	38
7.1.2	Exposure Assessment .....	38
7.1.2.1	Exposure Scenarios .....	38
7.1.2.2	Exposure Assumptions .....	40
7.1.3	Toxicity Assessment .....	40
7.1.4	Risk Characterization and Contaminants of Concern .....	40
7.1.5	Uncertainty in Risk Characterization .....	49
7.1.5.1	Operable Unit 1 - Soil and DNAPL .....	49
7.1.5.2	Operable Unit 2 - Ground Water .....	49
7.1.5.3	Operable Unit 3 - Elizabeth River Sediments .....	50
7.2	Ecological Risk Assessment .....	52
7.2.1	Risk Characterization .....	52
7.2.2	Uncertainty in Risk Characterization .....	54
8.	REMEDIAL ACTION OBJECTIVES (RAOs) .....	55
8.1	Soil .....	55
8.1.1	Soil RAOs .....	55
8.1.2	Soil Cleanup Criteria .....	56
8.2	Ground Water .....	56
8.2.1	Ground Water RAOs .....	56
8.2.2	Ground Water Cleanup Criteria .....	57
8.3	Elizabeth River Sediments .....	58
8.3.1	Elizabeth River Sediment RAOs .....	58
8.3.2	Elizabeth River Sediment Cleanup Criteria .....	58
9.	SUMMARY OF REMEDIAL ALTERNATIVES .....	59
9.1	Common Elements Included in All Alternatives .....	59
9.2	Remedial Alternatives .....	61
9.2.1	Alternative 1: No Action .....	61
9.2.2	Alternative 2: Soil Cover, Monitored Natural Attenuation (MNA)/Ground Water Monitoring, On-Shore Sheet Pile Wall, Subaqueous Cap, and Enhanced Monitored Natural Recovery (MNR) .....	61
9.2.3	Alternative 3: Geomembrane Cap, MNA/Ground Water Monitoring, On-Shore Sheet Pile Wall, Partial Dredging with Subaqueous Cap and Enhanced MNR .....	64
9.2.4	Alternative 4 (EPA's Selected Remedy): Soil Cover, Partial DNAPL Consolidation and Containment, MNA/Ground Water Monitoring, Dredging, Consolidation Behind Enhanced Off-Shore Sheet Pile Wall and at the West Side and Enhanced MNR .....	65
9.2.5	Alternative 5: <i>In-Situ</i> S/S of Soil and DNAPL, Soil Cover, MNA/Ground Water Monitoring, Enhanced On-Shore Sheet Pile Wall, Dredging with On-site Consolidation Except for Subaqueous Cap with Habitat Restoration in Wyckoff Inlet, and Enhanced MNR .....	67
9.2.6	Alternative 6: Low-Temperature Thermal Desorption of Soil, Pump and Treat DNAPL and Ground Water (West Side), MNA/Ground Water Monitoring, Enhanced On-Shore Sheet Pile Wall, Dredging with On-site Disposal Except for Subaqueous Cap with Habitat Restoration in Wyckoff Inlet, and Enhanced MNR .....	69
9.2.7	Alternative 7: Excavation with Off-site Disposal of Soil (West Side) and DNAPL (East & West), <i>In-Situ</i> S/S of Soil (East Side), <i>In-Situ</i> Chemical Oxidation of Ground Water (West Side), MNA, On-Shore Sheet Pile Wall, and Dredging with Off-Site Disposal .....	71
10.	EVALUATION OF ALTERNATIVES .....	72
10.1	Overall Protection of Human Health and the Environment .....	73
10.2	Compliance with ARARs .....	75
10.3	Long-term Effectiveness and Permanence .....	77

10.4	Reduction in Toxicity, Mobility, or Volume Through Treatment	79
10.5	Short-term Effectiveness	80
10.6	Implementability	81
10.7	Cost	83
10.8	State Acceptance	83
10.9	Community Acceptance	84
11.	SELECTED REMEDY	84
11.1	Summary of the Rationale for the Selected Remedy	85
11.2	Description of the Selected Remedy and Performance Standards	87
11.2.1	Enhanced Off-Shore Sheet Pile Wall	87
11.2.2	Sheet Pile Wall at the Eastern End of Portsmouth Port and Industrial Commission Property	88
11.2.3	Dredging With Consolidation Both Behind Sheet Pile Wall and on the West Side	89
11.2.3.1	<u>Delineation of Area to Be Dredged</u>	89
11.2.3.2	<u>Removal of Obstructions</u>	90
11.2.3.3	<u>Dredging</u>	90
11.2.3.4	<u>Monitoring During Dredging</u>	91
11.2.3.5	<u>Consolidation of Dredged Sediment</u>	92
11.2.4	Enhanced MNR	92
11.2.5	On-going Business Operations	93
11.2.5.1	<u>AWI Facility</u>	93
11.2.5.2	<u>Other Properties</u>	93
11.2.6	Unexploded Ordnance (UXO) Avoidance	94
11.2.7	Partial DNAPL Consolidation (West Side)	94
11.2.8	Stabilization/Solidification	95
11.2.8.1	<u>Areas Requiring Stabilization/Solidification</u>	95
11.2.8.2	<u>Solidification/Stabilization Requirements</u>	95
11.2.9	SPSA Property Soil Sampling	95
	Soil Cover	96
11.2.11	Wetlands Mitigation	97
11.2.12	Stormwater Management System	98
11.2.13	Passive Ground Water Mounding Control	98
11.2.13.1	<u>Phytoremediation</u>	98
11.2.13.2	<u>Passive Ground Water Release to River</u>	98
11.2.14	Long-term Ground Water Monitoring, including DNAPL Monitoring	99
11.2.15	Biota Monitoring	100
11.2.16	Institutional Controls	101
11.2.16.1	<u>Objectives</u>	101
11.2.16.2	<u>Implementation of Institutional Controls</u>	101
11.2.16.3	<u>Land Use Controls</u>	102
11.2.16.4	<u>Health and Safety Plan for Future Subsurface Work</u>	102
11.2.16.5	<u>Public Education</u>	103
11.2.17	Operations & Maintenance (O&M)	103
11.2.18	Other Performance Standards	103
11.2.18.1	<u>Applicable or Relevant and Appropriate Requirements</u>	103
11.2.18.2	<u>Health and Safety</u>	104
11.2.18.3	<u>Investigation-Derived Waste (IDW)</u>	104
11.2.18.4	<u>Erosion and Sediment Control</u>	104
11.2.18.5	<u>Decontamination</u>	104
11.2.18.6	<u>Traffic</u>	104
11.2.18.7	<u>Restored Acetylene Sludge Wetland Storm Drain</u>	105
11.3	Summary of the Estimated Remedy Costs	105
11.4	Expected Outcomes of the Selected Remedy	105

12.	STATUTORY DETERMINATIONS .....	108
12.1	Statutory Mandates that the Selected Remedy Must Meet .....	108
12.1.1	Protection of Human Health and the Environment .....	109
12.1.2	Compliance with Applicable or Relevant and Appropriate Requirements ...	110
12.1.3	Cost Effective .....	110
12.1.4	Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable .....	110
12.2	Statutory Preference for Treatment as a Principal Element .....	110
12.3	Five-Year Review Requirements .....	111
13.	DOCUMENTATION OF SIGNIFICANT CHANGES .....	111
<b>III.</b>	<b>RESPONSIVENESS SUMMARY .....</b>	<b>113</b>
1.	INTRODUCTION .....	115
2.	GENERAL COMMENTS .....	116
2.1	Wetland and Shallow River Habitat Loss Versus Restoration .....	116
2.2	Future Land Use .....	116
2.3	Land Ownership and Access to Navigational Waters .....	117
2.4	Consolidation of Heavily Contaminated Sediments and Soils Near the Elizabeth River and Long-term Effectiveness of the Sheet Pile Wall(s) .....	117
3.	DETAILED QUESTIONS, COMMENTS, AND CONCERNS .....	118
3.1	Community Involvement .....	118
3.2	Extent and Sources of Site Contamination .....	119
3.3	Site Risks .....	128
3.4	Elements and Cost of the Preferred Alternative .....	133
3.5	Implementation of the Preferred Alternative .....	139
3.6	Effectiveness of the Preferred Alternative .....	140
3.7	Environmental Impacts of the Preferred Alternative .....	147
3.8	Future Site Use .....	149
3.9	Other Issues .....	153
APPENDIX A: Figures .....		A-1
APPENDIX B: Tables .....		B-1
APPENDIX C: Contaminants of Potential Concern & Summary Statistics for Soil, Sediment, Air, Biota Tissue, and Ground Water Contaminant Levels .....		C-1
APPENDIX D: Human Health Risk Assessment Exposure Assumptions .....		D-1
APPENDIX E: Contaminants of Potential Concern Toxicity Data .....		E-1
APPENDIX F: Risk Characterization & Contaminants of Concern .....		F-1
APPENDIX G: Crab/Oyster Risk Characterization at Various Arsenic Levels .....		G-1
APPENDIX H: Virginia Department of Environmental Quality Concurrence Letter .....		H-1

## LIST OF ACRONYMS

ABM	Abrasive blast medium
AOC	Administrative Order by Consent
ARARs	Applicable or relevant and appropriate requirements
As	Arsenic
AWI	Atlantic Wood Industries
BaP	Benzo(a)pyrene
bgs	Below ground surface
BMPs	Best management practices
BTEX	Benzene, toluene, ethylbenzene, xylenes
C	Current exposure scenario
CCA	Chromated copper arsenate
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS ID	Comprehensive Environmental Response, Compensation and Liability Information System Identification
cm/sec	Centimeter per second
CNS	Central nervous system
COCs	Contaminants of concern
COPCs	Contaminants of potential concern
CR	Cancer risk
CSM	Conceptual Site Model
DNAPL	Dense non-aqueous phase liquid
DOE	Department of Energy
E	East
EPA	U.S. Environmental Protection Agency
ERA	Ecological risk assessment
ERP	Elizabeth River Project
F	Future exposure scenario
FFS	Focused Feasibility Study
FR	Federal Register
FS	Feasibility study
GI	Gastrointestinal
gpm	Gallons per minute
HHRA	Human Health Risk Assessment
HI	Hazard Index
HMWPAHs	High molecular weight polynuclear aromatic hydrocarbons
HpCDD	Heptachloro dibenzo-p-dioxin
HRS	Hazard Ranking System
ICs	Institutional controls
IDW	Investigation-derived waste
IR	Installation Restoration
LD50	Median lethal dose
LMES	Lockheed Martin Energy Systems
LOAEL	Lowest observed adverse effect level
LTTD	Low-temperature thermal desorption
MCL	Maximum Contaminant Level
MNA	Monitored natural attenuation
MNR	Monitored natural recovery
msl	Mean sea level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NESHAPs	National Emission Standards for Hazardous Air Pollutants

NNSY	Norfolk Naval Shipyard
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No observed adverse effect level
NPL	National Priorities List
NRC	National Research Council
O&M	Operation and maintenance
OCDD	Octachloro dibenzo-p-dioxin
ORP	Oxidation-reduction potential
OSWER	EPA's Office of Solid Waste and Emergency Response
OUs	Operable Units
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PCP	Pentachlorophenol
PPIC	Portsmouth Port and Industrial Commission
ppm	Parts per million
PRPs	Potentially Responsible Parties
PPSD	Portsmouth Public School District
PRDI	Pre-Remedial Design Investigation
PRGs	Preliminary remediation goals
RA	Risk Assessment
RAB	Restoration Advisory Board
RAGS	Risk Assessment Guidance for Superfund
RAOs	Remedial action objectives
RBC	Risk-based concentration
RCRA	Resource Conservation and Recovery Act
RfD	Reference dose
RI/FS	Remedial Investigation and Feasibility Study
RME	Reasonable maximum exposure
ROD	Record of Decision
S/S	Solidification/stabilization
SFs	Slope factors
SLERA	Screening-level ecological risk assessment
SPSA	Southeastern Public Service Authority
SVOCs	Semi-volatile organic compounds
TBC	To be considered
TBT	Tributyl tin
TCDD	Tetrachloro dibenzo-p-dioxin
TEQs	Toxicity equivalent quotients
TICs	Tentatively identified compounds
tPAHs	Total polynuclear aromatic hydrocarbons
UCL	Upper confidence limit
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	Underground storage tank
UXO	Unexploded ordnance
VAC	Virginia Administrative Code
VADEQ	Virginia Department of the Environmental Quality
VDOH	Virginia Department of Health
VEPCO	Virginia Electric Power Company
VMRC	Virginia Marine Resource Commission
VOCs	Volatile organic compounds
VPDES	Virginia Pollution Discharge Elimination System
W	West
WRDA	Water Resources Development Act

## ***I. DECLARATION***

***Atlantic Wood Industries, Inc. Site  
Operable Units 1, 2 and 3***

***Portsmouth, Virginia***

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**RECORD OF DECISION  
OPERABLE UNITS 1, 2 AND 3  
ATLANTIC WOOD INDUSTRIES, INC. SUPERFUND SITE**

**DECLARATION**

**1. SITE NAME AND LOCATION**

Atlantic Wood Industries, Inc. Superfund Site  
Portsmouth, Virginia  
CERCLIS ID # VAD990710410

**2. STATEMENT OF BASIS AND PURPOSE**

This decision document (hereinafter known as the 2007 Record of Decision or 2007 ROD) presents the amended selected remedial action for Operable Unit 1 (a Record of Decision was issued for Operable Unit 1 in 1995) and the selected remedial action for Operable Units 2 and 3 (collectively, “the selected remedial action” or “the remedial action” or “the selected remedy”) at the Atlantic Wood Industries, Inc. Superfund Site (site) located in Portsmouth, Virginia. This remedial action was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300. This decision document explains the factual and legal basis for selecting the remedial action for the three operable units at this site. The information supporting this decision is contained in the Administrative Record for this site.

The Virginia Department of the Environmental Quality (VADEQ), the support agency for this site, has reviewed the Record of Decision and concurs with the selected remedy, although with some reservation.

**3. ASSESSMENT OF THE SITE**

Pursuant to duly delegated authority, I hereby determine, pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606, that actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this 2007 Record of Decision, may present an imminent and substantial endangerment to public health, welfare, or the environment.

**4. DESCRIPTION OF THE REMEDY**

EPA’s selected remedy described in this 2007 Record of Decision addresses risks to human health and the environment from the three operable units (OUs) at the site. OU1 includes the soil and dense non-aqueous phase liquid (DNAPL) contamination mainly found at the Atlantic Wood Industries (AWI) property; OU2 includes contaminated ground water resulting from operations and/or activities at the AWI property; and OU3 includes sediments in the Southern Branch of the Elizabeth River contaminated from activities at the AWI property and any commingled or adjacent sediments that are contaminated to such an extent as to present a substantial threat of recontaminating the remediation area.

The estimated cost of the selected remedy is \$44.9 million. The main components of the selected remedy include:

- Installation of a sealed sheet pile off-shore wall(s) in the Southern Branch of the Elizabeth River to prevent DNAPL migration to the river and to create a consolidation area(s) mainly for dredged sediment
- Dredging where river sediments have contamination greater than 100 parts per million (ppm) of total polynuclear aromatic hydrocarbons (tPAHs) with consolidation of dredged sediment mainly behind the sheet pile wall (creating new land)
- Enhanced monitored natural recovery (MNR) of remaining sediments with tPAH concentrations between 45 and 100 ppm
- Excavation of DNAPL hot spots found on the west side of the AWI property with consolidation on the east side behind the sheet pile wall
- Treatment of contaminated sediments consolidated immediately behind the sheet pile wall
- A soil cover over the areas of contaminated soil, including land created by the consolidation of sediments
- Monitored natural attenuation (MNA) of ground water
- Creation of wetlands to replace lost wetlands due to sediment consolidation
- Operations and maintenance activities
- Institutional Controls (ICs)

## 5. ROD DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary of this ROD. Additional information can be found in the Administrative Record for this site.

ROD Data Certification Checklist	
Information	Location/Page Number
Chemicals of concern and respective concentrations	Section 7.1.1      Page <u>38</u> Section 7.1.4      Page <u>40</u> <b>Table 3</b> Page <u>42</u> <b>Table 4</b> Page <u>46</u> <b>Figures 5, 7, 8, 9, 10, 11, 12,</b> <b>13, 14, 15, 16, 17, 18, 19, 20,</b> <b>21, 22, and 31 in Appendix A</b> <b>Appendices C and F</b>

ROD Data Certification Checklist	
Information	Location/Page Number
Baseline risk	Section 7            Page <u>36</u> <b>Table 2</b> Page <u>38</u> <b>Table 3</b> Page <u>42</u> <b>Table 4</b> Page <u>46</u> <b>Table 5</b> Page <u>48</u> <b>Table 6 in Appendix B</b> <b>Appendices C, D, E, F, and G</b>
Cleanup levels and the basis for these levels	Section 8            Page <u>55</u> Section 11.2.3      Page <u>89</u> Section 11.2.4      Page <u>92</u> Section 11.2.7      Page <u>94</u> Section 11.2.10     Page <u>96</u> Section 11.2.13.2   Page <u>98</u> Section 11.2.14     Page <u>99</u> <b>Table 7 in Appendix B</b>
How source materials constituting principal threats are addressed	Section 9.2.4        Page <u>65</u> Section 10            Page <u>72</u> Section 11.1          Page <u>85</u> Section 11.2.3        Page <u>89</u> Section 11.2.7        Page <u>94</u> Section 11.2.8        Page <u>95</u> Section 11.2.10      Page <u>96</u> Section 11.2.14      Page <u>99</u> Section 11.2.16      Page <u>101</u> <b>Figures 25, 29, 30, and 31 in Appendix A</b>
Current and reasonably anticipated future site use assumptions and potential future beneficial uses of ground water used in the baseline risk assessments and the ROD	Section 6            Page <u>35</u> Section 8.2.2        Page <u>57</u> <b>Table 2</b> Page <u>38</u>
Potential future site and ground water use that will be available at the site as a result of the selected remedy	Section 6            Page <u>35</u> Section 8.2           Page <u>56</u> Section 11.1          Page <u>85</u> Section 11.4          Page <u>105</u>
Estimated capital, annual operation and maintenance, and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected	Section 11.3        Page <u>105</u> <b>Table 8 in Appendix B</b>
Key factors that led to selecting the remedy	Section 10            Page <u>72</u> Section 11.1          Page <u>85</u>

## 6. STATUTORY DETERMINATIONS


The selected remedial action is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the

remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

This remedy does not satisfy the statutory preference for treatment as a principal element of the remedy (i.e., reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment). While the selected remedy does require treatment and some principal threat waste will be treated, most of the principal threat waste (i.e., the DNAPL) will not be treated. After giving careful consideration of a range of remedial alternatives and the site characteristics both before and after implementation, EPA has determined that it is not appropriate at this site to meet the statutory preference for treatment as a principal element.

Because this remedial action will result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, a review will be conducted within five years of the initiation of remedial action, and every five years thereafter, to ensure that the remedy is, or will be, protective of human health and the environment.

**7. AUTHORIZING SIGNATURE**

  
James J. Burke, Director  
Hazardous Site Cleanup Division  
EPA Region 3

12/21/07  
Date